

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																											
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval																																																								
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Root Cause		FAULT CATEGORY																																																													
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____	
Misidentified ☐	Past Due ☐																																																														

Work Order ID 131537

Tuesday, April 14, 2015 10:05:41 AM

131537

Page 2

Item ID: D2199-25 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Strut
 Start Date: 4/14/2015 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 4/21/2015 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	QC3- Inspect Part Finish	0.00							DAS 38 9.99
140						(2)			APR 16 2015
QC	Memo	0.00							
Quality Control									
150	Identify as per dwg & Stock Location: <u>ST350</u>	0.00							
150						2			
Packaging	Memo	0.00							
Packaging									
160	QC21- Final Inspection - Work Order Release	0.00							
160									
QC	Memo	0.00							
Quality Control									

2 6 9.99 APR 17 2015
 MJS 15-04-17
 MF 15-4-17

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Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

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Page 1

Work Order ID: 131537

131537

Parent Item: D2199-25

D2199-25

Parent Item Name: Strut

Start Date: 4/14/2015

Required Date: 4/21/2015

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 13.03.05 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304TR0.750W.049		Purchased			No		f	213.4180		2			
M304TR0 750W 049												DAS 28 9-89	APR 14 2015
304 RD Tube .750 x .049W													

Location

Loc Qty

Loc Code

GA002

213.418

M128084

4

M129363

8.3

M130292

17

M131717

184.118

2x

DQA: _____ Date: _____

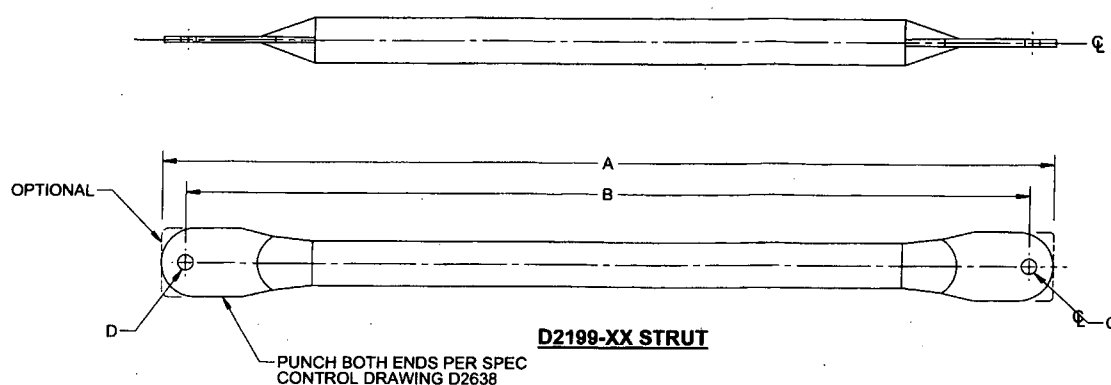


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Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
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PART NUMBER	A	B	C	D	WEIGHT (LBS)	FINISH
D2199-1	18.30	17.50	Ø0.257	Ø0.257	0.56	NOTE 2
D2199-3	5.80	5.00	Ø0.257	Ø0.257	0.17	NOTE 2
D2199-5	22.64	21.84	Ø0.257	Ø0.316	0.89	NOTE 2
D2199-7	14.74	13.94	Ø0.257	Ø0.257	0.45	NOTE 2
D2199-9	16.52	15.72	Ø0.257	Ø0.257	0.50	NOTE 2
D2199-11	23.60	22.80	Ø0.257	Ø0.316	0.72	NOTE 2
D2199-13	15.96	15.16	Ø0.257	Ø0.257	0.49	NOTE 2
D2199-15	17.57	16.77	Ø0.257	Ø0.257	0.54	NOTE 2
D2199-17	28.05	27.25	Ø0.257	Ø0.316	0.86	NOTE 2
D2199-19	18.90	18.10	Ø0.257	Ø0.257	0.58	NOTE 2
D2199-21	10.80	10.00	Ø0.257	Ø0.257	0.33	NOTE 2
D2199-23	26.18	25.38	Ø0.257	Ø0.316	0.81	NOTE 2
D2199-25	19.93	19.13	Ø0.257	Ø0.257	0.61	NOTE 2
D2199-27	27.34	26.54	Ø0.257	Ø0.316	0.84	NOTE 2
D2199-29	21.11	20.31	Ø0.257	Ø0.257	0.65	NOTE 2
D2199-31	15.55	14.75	Ø0.257	Ø0.257	0.45	NOTE 3

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL ROUND TUBING Ø0.750 X 0.049 WALL PER ASTM A213 OR ASME SA213 OR ASTM A269 REF DART SPEC. M304TR0.750W0.049
- 2) FINISH: POWDER COAT "WHITE" (4.3.5.2) PER DART QSI 005 4.3
- 3) FINISH: POWDER COAT GREY SANDEXT (4.3.5.6) PER DART QSI 005 4.3
- 4) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 7) IDENTIFICATION: IDENTIFY WITH DART P/N "D2199-XX" AND B/N BXXXXXX PER QSI 044, 6.5.
- 8) WEIGHT: PER CHART
- 9) MAKE PER TEMPLATE DT2199-XX WHERE XX IS THE RESPECTIVE DASH NUMBER.

RELEASED

2015 FEB 04

ECN 15-522 P-522

F	INCORPORATED E1, REFORMATTED AND REDRAWN. ADDED -31, ADDED GREY SANDEXT FINISH.	AJS	14.09.26
E	ADDED -23 AND -25 PER TSR A585M, ADDED TEMPLATE & SPEC CTRL. DWG REDRAWN IN CAD	KE	98.04.28
D	ADDED -21	N/A	N/A
C	ADDED -17 AND -19	N/A	N/A
B	ADDED -11, -13 AND -15	N/A	N/A
A	NEW ISSUE	JB	1993
REV.	DESCRIPTION	BY	DATE
DESIGN	JB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED	AP	DRAWING NO.	REV. X
MFG. APPR.	DD	D2199	SHEET 1 OF 1
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	STRUT DETAILS	NTS
DATE	14.09.26	COPYRIGHT © 2014 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY FORM WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

APPROVED

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FIRST ARTICLE INSPECTION CHECKLIST

DAS		DAS		DAS	
Measured by:	28	Audited by:	28	Preliminary Approval:	
Date:	9-89	Date:	9-89	Date:	
APR 14 2015		15-04-14			
Rev	Date	Change			
E	10.04.14	Added preliminary approval	Revised by	Approved	
			KJ		

10.04.15